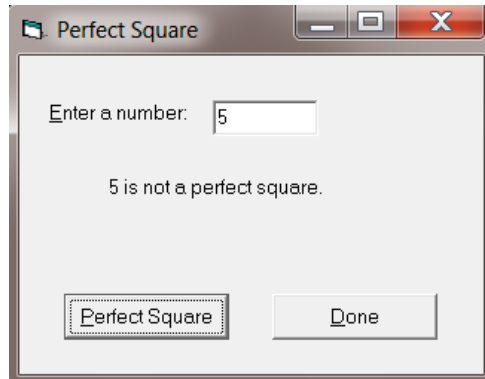


Programs

Chapter 8

Program 1

A perfect square is an integer whose square root is a whole number. For example, 4, 9, and 16 are perfect squares. Create a Perfect Square application that determines if the number entered by the user is a perfect square. Your code should include a PerfectSquare function that has an intNumber parameter and returns True if intNumber is a perfect square and False if it is not (Hint: use the Int function in determining if a square root is a whole number). The program interface should look similar to:



Program 2

Green Lawn Service charges the following prices for irregularly shaped lawns.

Lawn cutting	\$0.05 per square meter
Basic landscaping	\$1.00 per square meter
Deluxe landscaping	\$3.00 per square meter

They charge the following prices for square-shaped lawns:

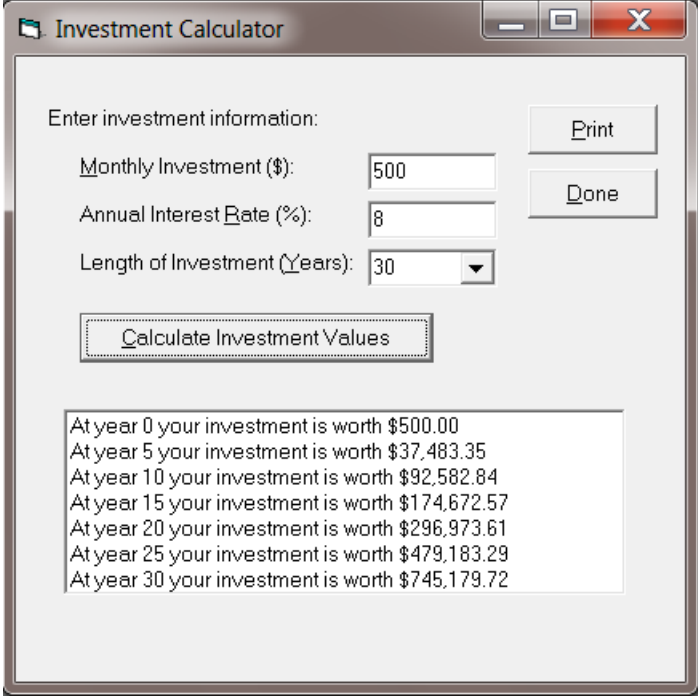
Lawn cutting	\$0.025 per square meter
Basic landscaping	\$0.50 per square meter
Deluxe landscaping	\$2.00 per square meter

The Green Lawn Service assumes that if the total square meters of a lawn has an integer square root, then it is a perfect shaped lawn. Create a Green Lawn Service program that allows the user to enter the lawn size in square meters and select from a list box the type of service, and then displays the total price of the service. Your code should include the PerfectSquare function from Program 1. The program should look similar to the following.



Program 3

Create an Investment Calculator program that allows the user to enter the amount invested monthly, annual interest rate, and length of the investment in years, the program should display the value of the investment at 5 year intervals in a list box. The program interface should look like the following.



The screenshot shows a Windows-style application window titled "Investment Calculator". Inside the window, there is a section labeled "Enter investment information:". Below this label are three input fields: "Monthly Investment (\$):" with the value "500", "Annual Interest Rate (%):" with the value "8", and "Length of Investment (Years):" with a dropdown menu showing "30". To the right of these fields are two buttons: "Print" and "Done". Below the input fields is a button labeled "Calculate Investment Values". At the bottom of the window is a list box containing the following text:

- At year 0 your investment is worth \$500.00
- At year 5 your investment is worth \$37,483.35
- At year 10 your investment is worth \$92,582.84
- At year 15 your investment is worth \$174,672.57
- At year 20 your investment is worth \$296,973.61
- At year 25 your investment is worth \$479,183.29
- At year 30 your investment is worth \$745,179.72